

Several examples will be described in the following few pages. Parts and percentages where used are parts and percentages as specified as weight or moles.

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EXAMPLE 1

Synthesis of a 85:15 (mol/mol) poly(lactide-co-glycolide) copolymer

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The method described below and utilized in this example is similar to those described in U.S. Patent Nos. 4,643,191, 4,653,497, 5,007,923, 5,047,048 which are incorporated by reference, and is known to those skilled in the art.

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To a flame dried 500 mL 1-neck round bottom flask equipped with an overhead mechanical stirrer and nitrogen inlet, 268 grams (1.86 moles) of L(-) lactide, 38.4 grams (0.330 moles) of glycolide, 0.53 grams (7×10^{-3} moles) of glycolic acid initiator, and 131 microliters of a 0.33 M solution of stannous octoate catalyst were added.

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The assembly was then placed in a high temperature oil bath at 185°C. The stirred monomers quickly began to melt. The low viscosity melt quickly increased in viscosity. Mechanical stirring of the high viscosity melt was continued for a total reaction time of 4 hours.

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The 85:15 (mol/mol) poly(lactide-co-glycolide) copolymer was removed from the bath, cooled to room temperature under a

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stream of nitrogen, isolated and ground. The polymer was then dried under vacuum at 110°C for 24 hours. Inherent viscosity using HFIP as a solvent was 1.90 dL/g.

5 EXAMPLE 2

Synthesis of a 95:5 (mol/mol) poly(ϵ -caprolactone-co-p-dioxanone) copolymer

- 10 The method described below in this example is similar to those described in U.S. Patent Nos. 4,643,191, 4,653,497, 5,007,923, 5,047,048 which are incorporated by reference, and is known to those skilled in the art.
- 15 To a flame dried 500 mL 1-neck round bottom flask equipped with an overhead mechanical stirrer and nitrogen inlet, 262.43 grams (2.3 moles) of ϵ -caprolactone, 12.38 grams (0.12 moles) of p-dioxanone, 0.84 grams (0.011 moles) of glycolic acid initiator, and 147 microliters of a 0.33 M
- 20 solution of stannous octoate catalyst were added.

- The assembly was then placed in a high temperature oil bath at 190°C. The stirred monomers quickly began to melt. The low viscosity melt quickly increased in viscosity. Mechanical
- 25 stirring of the high viscosity melt was continued for a total reaction time of 24 hours.

- The 95:5 (mol/mol) poly(ϵ -caprolactone-co-p-dioxanone) copolymer was removed from the bath, cooled to room
- 30 temperature under a stream of nitrogen, isolated and ground.

The polymer was then dried under vacuum at 40°C for 24 hours. Inherent viscosity using HFIP as a solvent was 1.77 dL/g.

EXAMPLE 3

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Blending of a 85:15 (mol/mol) poly(lactide-co-glycolide) copolymer with a 95:5 (mol/mol) poly(ε-caprolactone-co-p-dioxanone) copolymer at a blended weight ratio of 95:5

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29.45 grams of a 85:15 (mol/mol) poly(lactide-co-glycolide) prepared as described in Example 1 was melt blended with 1.55 grams of the 95:5 (mol/mol) poly(ε-caprolactone-co-p-dioxanone) copolymer of Example 2 at a weight ratio of 95:5 in a Brabender Plasti-corder mixer at a temperature of 170°C for 23 minutes. The resulting blend was removed from the Brabender mixer, cooled, ground and dried under vacuum at 50°C for 24 hours. Inherent viscosity using HFIP as a solvent was 1.90 dL/g.

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EXAMPLE 4

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Blending of a 85:15 (mol/mol) poly(lactide-co-glycolide) copolymer with a 95:5 (mol/mol) poly(ε-caprolactone-co-p-dioxanone) copolymer at a blended weight ratio of 80:20

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24.8 grams of a 85:15 (mol/mol) poly(lactide-co-glycolide) prepared as described in Example 1 was melt blended with 6.2 grams of the 95:5 (mol/mol) poly(ε-caprolactone-co-p-dioxanone) copolymer of Example 2 at a